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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,822	08/17/2006	Koji Watanabe	80054(30721)	2431
7590 James E. Armstrong, IV EDWARDS ANGELL PALMER & DODGE LLP P.O. Box 55874 Boston, MA 02205			EXAMINER LE, TUNG X	
			ART UNIT 2821	PAPER NUMBER
			MAIL DATE 09/03/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/589,822

Applicant(s)

WATANABE ET AL.

Examiner

TUNG X. LE

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment submitted 6/5/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 8, 9, 16, 22 and 23 is/are rejected.
- 7) ☒ Claim(s) 2-7, 10-15, 17-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to the Applicants' amendment submitted on June 05, 2008. In virtue of this amendment, claims 1-23 remain pending in the instant application.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 8-9, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamoi et al. (U.S. 6,437,515 B1 of record).

With respect to claim 1, Kamoi discloses in figure 14 a discharge lamp ballast, comprising a power converter (having a buck converter including an *inductor* [L2], a *switching component* connected between [L2] and [D11], and a *diode* connected between a low potential and a high potential connected at a node located between the component and the inductor [L2]) that includes at least one switching element (having the *switching component*) and is connected between a power source (having a DC power outputted from the rectifier [DB]) and a high intensity discharge lamp [La]; and a control circuit (having a control circuit including elements [Vla Detec., Il a Detec., Wla Detect Circ., and Drv. Circ]) that control an on/off state of the switching element so as to provide prescribed lamp power for the lamp based on lamp power control after the start of the lamp (column 13, lines 58-64); wherein the control circuit controls the on/off state

of the switching element [switching component] so that at least one of an effective value and a peak value (figures 15-16 show an effective value and a peak value of the lamp current for starting up the lamp at the second period of time [II]) of the lamp power provided for the lamp is increasing more than that adjusted by constant lamp power control (having a constant power control at the third period of time of which are having a value smaller than the effective value or the starting up value of the lamp current) based on high power control after the start of the lamp, the constant lamp power control being control for adjusting the effective value of the lamp power provided for the lamp a prescribed power value (figures 15-16).

With respect to claim 8, Kamoi discloses that the control circuit controls the on/off state of the switching element based on the high power control for a prescribed time period [I, II, or τ] immediately after reaching a stable state of the lamp (figure 16 shows the stable state of the lamp after the second time period [II]).

With respect to claim 9, Kamoi discloses that wherein after reaching a stable state (at the third time period shown in figures 16 and 19) of the lamp, control for on/off state of the switching element based on the constant lamp power control and control for the on/off state of the switching element based on the high power control are performed alternately and periodically through the control circuit (figures 16[d] to 20 show a high resonance voltage performing alternately and periodically in time periods).

With respect to claim 16, Kamoi discloses that the control circuit executes correction control (column 13, lines 58-64).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamoi et al. (U.S. 6,437,515 B1 of record) in view of Takahara (U.S. 6,992,718 B1 of record).

With respect to claims 22 and 23, Kamoi discloses all of claimed subject matter, as expressly recited in claim 1, except for specifying that a projector comprising a color filter whose transmission color by light from the light source and the control circuit synchronizes timing of polarity inversion of the lamp voltage applied across the lamp.

Takahara discloses in figures 120-121 and 159 a discharge lamp ballast functioning as a projector for a projection display apparatus (column 110, lines 20-25) having a color filter [124] whose transmission color by light from the light source and control circuit synchronizes timing of polarity inversion of the lamp voltage applied across the lamp (column 73, lines 10-18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the ballast circuit of Kamoi by employing the discharge ballast circuit including a projector having a filter color for transmitting color with polarity inversion of the lamp voltage applied across the lamp in order for preventing occurrence of flicker and inclination in the brightness for getting a desired images since such a use

of projector having a filter for transmitting color for the stated purpose has been well known in the art as evidenced by the teaching of Takahara (see column 73, lines 18-20).

Allowable Subject Matter

5. Claims 2-7, 10-15, and 17-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed 06/05/2008 have been fully considered but they are not persuasive.

Applicants argued that Kamoi fails to disclose "*...the control circuit controls on/off state of the switching element so that at least one of an effective value and a peak value of the lamp power provided for the lamp is increased more than that adjusted by constant lamp power control, the constant lamp power control being control for adjusting the effective value of the lamp power provided for the lamp to a prescribed power value.*" (in page 4). The Examiner respectfully disagrees. Kamoi discloses the control circuit (including elements a VIa detection circuit, an IIa detection circuit, a WIa detection circuit, and a drive circuit) to control on/off state of the switching element (having a switching element connected between the diode [D11] and the inductor [L2] for stating on/off the power supplied to the lamp [La]) so that at least one of an effective value and a peak value (figures 16d to 20d clearly show the effective/prescribed value of the lamp voltage increased during the timing II in each period and adjusted the effective value to

a constant value to stabilize the lighting voltage/current/power lamp) of the lamp power provided for the lamp is increased more than that adjusted by constant lamp power control, the constant lamp power control being control for adjusting the effective value of the lamp power provided for the lamp to a prescribed power value (a lighting value) (see figures 14-20).

For these reasons, claims 1, 8-9, 16, and 22-23 remain rejected under 35 U.S.C. 102(b) as being anticipated by Kamoi.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUNG X. LE whose telephone number is (571)272-6010. The examiner can normally be reached on 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tung Le
08/25/2008

/David Hung Vu/
Primary Examiner, Art Unit 2821